

Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Purchased Terms	Purchased Item	Description	For Part No	Project ID	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name	
PO040517	ACI001-VC	1	1	Net/30	MT-A513-T-3.750W0.125	ASTM A513 TYPE 5 (1020/1026) ALLOY STEEL ROUND TUBING				6/7/31/2018	6		S103075	Stock	8/16/2018	\$ 120.30 / ft	0		\$771.84	Acier Ouellette Inc.		
		5			MT-4140-B-2.000X4.000	Steel Bar						4		S103076	Stock	8/16/2018	\$ 82.54 / ft	0		\$330.17	Acier Ouellette Inc.	
		6			MT-4140-B-0.500X4.000	4140 Steel Bar 0.500 X 4.000 : AISI 4140 STEEL BAR PER ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626 MINIMUM ROCKWELL C = 28 RC MAXIMUM ROCKWELL C = 32 RC receive ft							4		S103077	Stock	8/16/2018	\$ 31.01 / ft	0		\$124.04	Acier Ouellette Inc.
		7			MT-4140-S-0.500	AISI 4140 Steel Sheet : AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395						11		S103078	Stock	8/16/2018	\$ 80.34 / sf	0		\$892.60	Acier Ouellette Inc.	
Total:												25		26						\$1,613.60		

ACIER OUELLETTE INC.

935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT**Copy**

CO00100857

Billed to
DART AEROSPACE LTD
1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Att : CHANTAL LAVOIE Tél.: 613-632-5200
Delivery Route 5

Instruction F-M

Shipped to
DART AEROSPACE LTD
, Ontario,
Att : CHANTAL LAVOIE Tél.: 613-632-5200
Delivery Route 5

Instruction

F-M

Product Description	Weight	Qty	UM	PCS NB				Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C	OUT
1 TUBE MEC 3.750 OD X .120 (R) TME-3750120 6697 1 X 6' ** CERTIFICATE **	27.91	6.00	PI								
<i>LINE# 1</i>											
<i>AC18277-tt-2018-07-25 Heat .813X62610 A</i>											
2 TUBE MEC 0.750 OD X .058 NS TME-0750058 40 2 X 20" R/L ** CERTIFICATE **	88.80	40.00	PI-\$PI								
<i>LINE# 2</i>											
<i>AC18278-JG-2018-07-26 HEAT : A718541</i>											
3 PLATE 4140 HEAT TREAT 2 NS P4140-2H 9072 1 X 4" X 4' ** CERTIFICATE **	108.65	1.33	PI2								
<i>HT#</i>											
<i>LINE# 5</i>											
<i>AC18279-FU-2018-08-01 HEAT : C613450 A</i>											



DELIVERY - CLIENT

C000100857

Copy

1

NIK : R-109315-B

Total Weight (lbs) : 4/9,39

Conditions : All sold and delivered materials remain the property of "Aciel Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Aciel Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Aciel Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration costs of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice, to claim for the price of the goods sold or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to

Prepared By :	Verified By :
Delivered By :	Time
Customer's Signature	
18/08/16	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO040517

Supplier:	ACI001-VC Acer Ouellette Inc. 935 Boul. Du Havre Valleyfield QC J6S 5L1 Canada Phone: 800 667 4248 Fax: 450 377 5696	PO No:	PO040517
		PO Date:	7/17/18
		Due Date:	7/24/18
		Purchase Order Revision:	
		Revision Date:	
		Ship-To Contact:	Lavoie, Chantal Phone: clavoie@dartaero.com
Ship To:	1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200	Via:	Ground
		Pymt Terms:	Net 30
		Freight Terms:	
		Special Comments:	quotation no sou0119261

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1		MT-A513-T-3.750W0.125		ASTM A513 TYPE 5 (1020/1026) ALLOY STEEL ROUND TUBING	Firmed	-	7/24/18	6 ft	6 ft	\$120.30/ft	\$721.80	
2 ✓ <i>MT</i>		MT-A513-T-0.750W0.085		A513 Seamless Alloy Steel Round Tubing 0.75"dia. x 0.085" Wall	Firmed	-	7/24/18	120 ft	0 ft	\$4.65/ft	\$558.00	
3		MT-A513-T-0.750W0.058		A513 Seamless Alloy Steel Round Tubing 0.75"dia. x 0.058" Wall : ASTM A513 TYPE 5 (1020/1026) SEAMLESS ALLOY STEEL ROUND TUBING (DOM)	Firmed	-	7/31/18	40 ft	0 ft	\$10.90/ft	\$436.00	
4		MT-HRS-S-6GA		Hot Rolled Steel Sheet 6 Gauge 0.1943"	Firmed	-	7/24/18	16 sf	0 sf	16 sf	\$7.36625/sf	\$117.86

Line Item Note: 1 pcs of 4 ft x 4 ft

5	MT-4140-B-2.000X4.000	Steel Bar	Firmed	-	7/31/18	4 ft	0 ft	4 ft	\$82.5425/ft	\$330.17
6	MT-4140-B-0.500X4.000	4140 Steel Bar 0.500 X 4.000 : AISI 4140 STEEL BAR PER ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626 MINIMUM ROCKWELL C = 28 RC MAXIMUM ROCKWELL C = 32 RC receive ft	Firmed	-	7/24/18	4 ft	0 ft	4 ft	\$31.01/ft	\$124.04
7	MT-4140-S-0.500	AISI 4140 Steel Sheet : AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395	Firmed	-	7/24/18	11.111 sf	0 sf	11 sf	\$80.34218/sf	\$892.68

Line Item Note: 1 pcs of 40" x 40"

PURCHASE ORDER

Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
8 ✓ AT		M1018R4.000		M1018R4.000 : MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108 receive ft	Firmed -		7/20/18	2 ft	✓ 2 ft		\$71.62/ft	\$143.24
9 ✓ AT		M1018R2.750		M1018R2.750 : MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108	Firmed -		7/24/18	6 ft	✓ 6 ft		\$29.115/ft	\$174.69
10 ✓ AT		M303R2.500		303 Round Bar 2.5" : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft	Firmed -		7/24/18	4 ft	✓ 4 ft		\$20.50/ft	\$82.00
11 ✓ AT		M304S11GA		304/316 0.125 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240	Firmed -		7/24/18	32 sf	✓ 32 sf		\$15.5375/sf	\$497.20
12 ✓ AT		M5052H32S.040		5052-H32 .040 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf	Firmed -		7/24/18	32 sf	✓ 32 sf		\$4.1434375/sf	\$132.59
13 ✓ AT		M6061T6R1.250		6061-T6 Round Bar 1.250 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	✓ 20 ft		\$4.985/ft	\$99.70
14 ✓ AT		MT-1144-R0.750		1144 Steel Proof Round Bar 0.750" : MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440	Firmed -		7/31/18	24 ft	✓ 22 ft		\$3.12/ft	\$74.88
Line Item Note	2 pcs of 12 ft											
15 ✓ AT		M6061T6B1.000X02.000		6061-T6 Bar 1.00 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	✓ 20 ft		\$8.303/ft	\$166.06

PURCHASE ORDER

Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
16 <i>AT</i>		M6061T6B0.375X0.750		6061T6 Bar .375 X .750 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	0 ft <i>20ft</i>	20 ft	\$1.288/ft	\$25.76
17 <i>AT</i>		M6061T6B0.500X02.000		6061-T6 Bar .500 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	0 ft <i>20ft</i>	20 ft	\$4.148/ft	\$82.96
18 <i>AT</i>		M6061T6B0.750X02.000		6061-T6 Bar .750 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	0 ft <i>20ft</i>	20 ft	\$6.2895/ft	\$125.79
19 <i>AT</i>		M6061T6B3.000X01.500		6061-T6 Bar 3.00 X 1.50 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	12 ft	0 ft <i>12ft</i>	12 ft	\$18.043333/ft	\$216.52
20 <i>AT</i>		M6061T6S.040		6061-T6 .040 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive sf	Firmed -		7/24/18	144 sf	0 sf <i>96sf</i>	144 sf	\$8.5069444/sf	\$1,225.00
21 <i>AT</i>		M6061T6S.080		6061-T6 .080 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive sf	Firmed -		7/24/18	288 sf	0 sf <i>288sf</i>	288 sf	\$9.6979166/sf	\$2,793.00

Grand Total: \$9,019.94

Order Notes

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Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents
A048 counterfeit parts avoidance, detection, mitigation and disposition program
A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 7/18/18 12:53 PM *dart.lavoie.chantal*

CO 100857

P.O 18277

Dark

CERTIFICATE OF TEST

Page 01 of 01

Certification Date
25-JUL-2018

CUSTOMER ORDER NUMBER

AC00018277

Invoice Number
T132129

CUSTOMER PART NUMBER

SOLD TO: ACIER OUELLETTE INC. **SHIP TO:** ACIER OUELLETTE INC.
 DIVISION SALABERRY-DE-VALLEYFIELD DIVISION SALABERRY-DE-VALLEYFIELD
 935, BOUL DU HAVRE 935, BOUL DU HAVRE
 SALABERRY-DE- VALLEYFIELD QC J6S 5L1 SALABERRY-DE- VALLEYFIE QC J6S

Description: 1020 DOM SRA A513/5
~~3.750 OD X 3.500 ID X 6'5.0" (77.0") REMNAN Line Total. 6.4 FT~~
 HEAT: 813X62610 ITEM: 107457

Specifications:
 ASTM A513 TP 5

CHEMICAL ANALYSIS

C	MN	P	S	AL	SI	CB	V
0.19	0.36	0.008	0.006	0.042	0.085	0.002	0.001
CU	MO	NI	CR	B			
0.023	0.004	0.01	0.02	0.0002			

RCPT: R273456

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR PSI	ULT TEN PSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS RB
	64100.0	76700.0	20.0		85

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

TERRY GALBRAITH

Material did not come in contact with mercury while in our possession.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.



The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes.

MANAGER, CORPORATE PURCHASING

SPECIFICATION CONTROL DRAWING

REV.	REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A		NEW RELEASE	17-655	17.08.06	VM	WM
B		TYPE 5 ADDED, TEMPLATE UPDATED	17-790	17.12.13	VM	ML

PURCHASE MATERIAL: ASTM A513 TYPE 5 (1020/1026) SEAMLESS ALLOY STEEL ROUND TUBING (DOM)

SPECIFICATION:

ASTM A513 TYPE 5

MT-A513-T-[D,DDD]W[T,TTT]

WHERE D,DDD IS OUTSIDE DIAMETER IN INCHES

WHERE T,TTT IS WALL THICKNESS IN INCHES

EG. 3/4" ROUND TUBING WITH .120" WALL THICKNESS = MT-A513-T-0.750W0.120

DART AEROSPACE 1999 Stoney, Camrose, Canada	
TITLE ASTM A513 TYPE 5 (1020/1026) ALLOY STEEL ROUND TUBING (DOM)	
PART NO.	REV
MT-A513-T	B
TOOL NO.	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. DIMENSIONS NOT APPLIED AS PER PRINTING	
DESIGNED BY:	INITIALS AND DATE
VM	17/12/13
DRAINED BY:	VM
VM	12/12/007
CHECKED BY:	XX
ML	12/20/007
MFG REVERSED BY:	XX
DP	12/20/007
APPROVED BY:	ML
APPROVED DATE:	12/20/007
SCALE:	INTS
1 SHEET OF 1	
COPYRIGHT © 2011 BY DART AEROSPACE LTD	
ALL INFORMATION CONTAINED HEREIN IS UNPUBLISHED PROPRIETARY INFORMATION.	
IT MAY NOT BE COPIED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN CONSENT OF DART AEROSPACE LTD.	

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-AS13 - T-3.750W0.125 PO / BATCH NO.: P0040517/5103075
 DATE: 18/08/16

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 6.416 ft
 QUANTITY INSPECTED: 6.416 ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.750" 0.125"
 THICKNESS RECEIVED: 3.750" 0.125"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORROSION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/> N <input type="radio"/>	<i>ASTM AS13 Type 5</i>
CORRECT THICKNESS	Y <input checked="" type="radio"/> N <input type="radio"/>	
PHOTO REQUIRED	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="radio"/> N <input type="radio"/>	<i>HT: 813X62610</i>
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N <input type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/08/16</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Chemical certification
Certification chimique

18279N

Order Num / No. Commande AC-18279	Vendor / Fournisseur 52	Country of origin / Pay d'origine CHINA	Date 11/16/17	Heat / coulée C613450	Material ID # / No. matière
Grade / Nuance 4140 PLT	Conditions HEAT TREATED				
Shape / Forme PLT	Size / Dimension 2.000	Specifications ASTM A829, ASTM A578 CLASS A			

Chemical composition / Analyse chimique

Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)
Mini / maxi 0.3700 / 0.4400	0.1500 / 0.3500	0.6500 / 1.1000	0.0100 / 0.0190
Actuel % 0.390	0.260	0.930	0.020
Sulphur (S)	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)
Mini / maxi 0.0200 / 0.0400	0.7500 / 1.2000	0.1000 / 0.2000	0.1500 / 0.2500
Actuel % 0.002	1.050	0.000	0.210
Cooper (Cu)	Vanadium (V)	Aluminum (Al)	Tungsten (W)
Mini / maxi 0.1900 / 0.2900	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000
Actuel % 0.000	0.000	0.000	0.000
Cobalt (Co)	Titanium (Ti)		
Mini / maxi 0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000
Actuel % 0.000	0.000	0.000	0.000

Mechanical properties / Propriétés Mécaniques

Yield strength / Élasticité	Tensile / Rés. à la traction	Elongation / Allon. (%)	Red. of area / Surface (%)	RC	Surface Hd / Dureté
680.000 PSI	895.000 PSI	16.00	41.00		30 BHN

Note:

We certify that the above data has been verified and are conform to an original mill or supplier certificate supplied to us with the material

Nous certifions que les données ci haut ont été vérifier et sont conformes d'après un certificat originale qui nous a été fourni par notre fournisseur.

MJ

Prepared by: / Préparé par:

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 4142 STEEL BAR
MINIMUM ROCKWELL C = 28 Rc
MAXIMUM ROCKWELL C = 32 Rc

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PART NUMBER:

MT-4140-B-[T,TTT]X[W,WWW]
WHERE "T,TTT" = THICKNESS IN INCHES
WHERE "W,WWW" = WIDTH IN INCHES

EX 4.0" x 6.0" BAR = MT-4140-B-4.000x6.000

REV	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	17-780	17-12-13	V/M	ML
B	MIN & MAX RE CHANGED	18-523	18-01-24	V/M	ML
C	ADD ANSI 4442	18-544	18-02-14	ML	ML

DART AEROSPACE		1000 University, Ontario, Canada	
MT-4140-B / 4142 STEEL BAR			
TITLE			
PART NO.	MT-4140-B		
TOOL NO.			
DESIGNED BY:	INITIALS AND DATE		
DRAWN BY:	VM 02/14/2018		
REVIEWED BY:	XXX / 205		
CHECKED BY:	X / 41		
APPROVED BY:	X / 41		
SCALE 1:1 REPRODUCIBLE			
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PRINTED ON 02/14/2018 BY DART AEROSPACE INC.			



SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE
 MINIMUM ROCKWELL C = 28 Rc
 MAXIMUM ROCKWELL C = 32 Rc

SPECIFICATION:

ASTM A829, AMS 6395

PART NUMBER:

MT-4140-S-[T].[TTT] x [W].[WWW]
 WHERE "T.TTT" = THICKNESS IN INCHES
 WHERE "W.WWW" = WIDTH IN INCHES (OPTIONAL FOR SPECIFYING CUT PLATE)

EX. 0.063" THICK SHEET T = MT-4140-S-0.063
 EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

DART AEROSPACE		Markham, Ontario Canada	
TITLE			
AISI 4140 / 4142 STEEL SHEET OR PLATE			
PART NO.	REV		
MT-4140-S	A		
TOOL NO. _____			
UNLESS OTHERWISE SPECIFIED: INTERFACIAL DIMENSIONS ARE IN MILLIMETERS. INTERNAL DIMENSIONS ARE IN INCHES. DIMENSIONS APPLY AFTER PRESHAPING.			
INITIALS AND DATE			
DESIGNED BY:	VM 2/13/2018		
DRAWN BY:	VM 02/13/2018		
CHECKED BY:	XX 2.05		
MFG REVIEW BY:	VM 02/13/2018		
APPROVED BY:	XX 1.01		
FRACTIONS: 1/8			
TOLERANCES: .005			
SIGNAGE: X			
ROUGHNESS: X			
SCALE: MTS			
SHEET OF 1			
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The drawings and specifications contained herein are the sole property of DART Aerospace Ltd. They are to be used only for the manufacture of parts specifically ordered by DART Aerospace Ltd. They are not to be reproduced or distributed without written permission.			
1	2	3	4
5	6	7	8

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4/40-B-2,000x1,000
 DATE: 18/08/16

PO / BATCH NO.: P0040517/S103076

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 4 ft
 QUANTITY INSPECTED: 4 ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.000"
 THICKNESS RECEIVED: 2.000"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORROSION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/> N <input type="radio"/>	<u>ASTM A829</u>
CORRECT THICKNESS	Y <input checked="" type="radio"/> N <input type="radio"/>	
PHOTO REQUIRED	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="radio"/> N <input type="radio"/>	<u>HT: C613450</u>
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N <input type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/08/16</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

10852
Dart

Chemical certification
Certification chimique

18279 N

Order Num / No. Commande AC-18279	Vendor / Fournisseur 46	Country of origin / Pay d'origine SLOVENIA	Date 09/10/16	Heat / coulée 297080	Material ID # / No. matériel
Grade / Nuance 4140 PLT	Conditions HEAT TREATED Q&T E + VD				
Shape / Forme FLT	Size / Dimension 0.500	Specifications ASTM A829/A829M			

Chemical composition / Analyse chimique

Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)
Mini / maxi 0.3700 / 0.4400	0.1500 / 0.3500	0.6500 / 1.1000	0.0100 / 0.0190
Actuel % 0.430	0.224	0.783	0.007
Sulphur (S)	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)
Mini / maxi 0.0200 / 0.0400	0.7500 / 1.2000	0.1000 / 0.2000	0.1500 / 0.2500
Actuel % 0.001	0.960	0.130	0.160
Cooper (Cu)	Vanadium (V)	Aluminum (Al)	Tungsten (W)
Mini / maxi 0.1900 / 0.2900	0.0400 / 0.0500	0.0090 / 0.0190	0.0000 / 0.0000
Actuel % 0.244	0.039	0.015	0.000
Cobalt (Co)	Titanium (Ti)		
Mini / maxi 0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000
Actuel % 0.000	0.000	0.000	0.000

Mechanical properties / Propriétés Mécaniques

Yield strenght / Élasticité	Tensile / Rés. à la traction	Elongation / Allon. (%)	Red. of area / Surface (%)	RC	Surface Hd / Dureté
0.000	PSI	0.000	PSI	0.00	284 BHN

Note:

We certify that the above data has been verified and are conform to an original mill or supplier certificate supplied to us with the material

Nous certifions que les données ci haut ont été vérifier et sont conformes d'après un certificat originale qui nous a été fourni par notre fournisseur.



Prepared by: / Préparé par:

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL BAR
MINIMUM ROCKWELL C = 28 Rc
MAXIMUM ROCKWELL C = 32 Rc

SPECIFICATION: ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626, MIL-S-24093

PART NUMBER:

MT-4140-B-[T].[TT] x [W].[WWW]
WHERE "T.[TT]" = THICKNESS IN INCHES
WHERE "W.[WWW]" = WIDTH IN INCHES
EX. 4.0" x 6.0" BAR = MT-4140-B-4.00x6.000

DART AEROSPACE		AeroSpace, Cherry, California	
TITLE		AISI 4140 / 4142 STEEL BAR	
PART NO	REV	REV	C
MT-4140-B			
TOOL NO.:			
UNLESS OTHERWISE SPECIFIED: INTERFACES ARE TO BE TOLERANCED AS PER THE DRAWINGS. DIMENSIONS APPLY AFTER FINISHING.			
INITIALS AND DATE:	VM 12/12/2017	REVISIONS:	1/0
DESIGNED BY:	VM 02/14/2018	FRACTIONS:	X .005
DRAWN BY:	VM 02/14/2018	A: .005	Z: .01
CHECKED BY:	VM 02/14/2018	MATERIAL:	
MFG REVIEW BY:	DD 02/14/2018	ROUGHNESS:	
APPROVED BY:	ML 02/14/2018	SCALE, HTS:	
SHEET OF 1			
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SPECIFICATION CONTROL DRAWING

1	2	3	4	5	6	7	8
REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED		
A	NEW ISSUE	18-544	18.2.13	VM	ML		
B							
C							
D							

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE
 MINIMUM ROCKWELL C = 28 RC
 MAXIMUM ROCKWELL C = 32 RC

ASTM A829 / AMS 6395

SPECIFICATION:

PART NUMBER:

MT-4140-S-[T].[TTT] X [W].[WWW]
 WHERE "T.[TTT]" = THICKNESS IN INCHES
 WHERE "W.[WWW]" = WIDTH IN INCHES (OPTIONAL FOR SPECIFYING CUT PLATE)

EX. 0.063" THICK SHEET T = MT-4140-S-0.063
 EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

DART AEROSPACE		Headquarters, Orlando, Florida
AISI 4140 / 4142 STEEL SHEET OR PLATE		
PART NO.	REV.	A
TOOL NO.:	UNLESS OTHERWISE SPECIFIED: 1. ALL DIMENSIONS ARE IN INCHES. 2. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. 3. UNLESS OTHERWISE SPECIFIED, DIMENSIONS APPLY AFTER POKING. 4. UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE AS PER ASME Y14.5M-2008.	
INITIALS AND DATE:	TOLERANCE:	
DESIGNED BY:	VM 27/13/2018	FRACTIONS: <input checked="" type="checkbox"/>
DRAWN BY:	VM 02/13/2018	XXX.005: <input checked="" type="checkbox"/>
CHECKED BY:	XX 2.01	XX 1.0: <input checked="" type="checkbox"/>
MFG REVIEWED BY:	X	SURFACE ROUGHNESS: <input checked="" type="checkbox"/>
APPROVED BY:	DD 02/13/2018	SCALE: MTS. <input checked="" type="checkbox"/>
	ML 02/13/2018	SHEET 1 OF 1. <input checked="" type="checkbox"/>
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4(40.3 - 0.50x4.00
 DATE: 18/08/16

PO / BATCH NO.: P0040517/S103077

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 4ft
 QUANTITY INSPECTED: 4ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.50"
 THICKNESS RECEIVED: 0.50"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<u>Y</u> <u>N</u>	
CORRECT FINISH	<u>Y</u> <u>N</u>	
CORROSION	<u>Y</u> <u>N</u>	
CORRECT GRAIN DIRECTION	<u>Y</u> <u>N</u>	
CORRECT MATERIAL PER M-DRAWING	<u>Y</u> <u>N</u>	<u>A304 A829</u>
CORRECT THICKNESS	<u>Y</u> <u>N</u>	
PHOTO REQUIRED	<u>Y</u> <u>N</u>	
CORRECT REF # TO LINK CERT	<u>Y</u> <u>N</u>	<u>HT: 247080</u>
CORRECT MATERIAL IDENTIFICATION	<u>Y</u> <u>N</u>	
CORRECT M# ON THE MATERIAL	<u>Y</u> <u>N</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<u>Y</u> <u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<u>Y</u> <u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/08/16</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE
 MINIMUM ROCKWELL C = 28 Rc
 MAXIMUM ROCKWELL C = 32 Rc

SPECIFICATION:

PART NUMBER:

MT-4140-S-[T.TTT] x [W.WWW]
 WHERE "T.TTT" = THICKNESS IN INCHES
 WHERE "W.WWW" = WIDTH IN INCHES (OPTIONAL FOR SPECIFYING CUT PLATE)

EX. 0.063" THICK SHEET = MT-4140-S-0.063
 EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

DART AEROSPACE		Heavy Industry, Defense, Commercial	
Title			
AISI4140 / 4142 STEEL SHEET OR PLATE			
Part No.	Rev		
MT-4140-S	A		
Tool No. _____			
Initials and Date			
Designed by:	VM 27/3/2018		
Drawn by:	VM 02/13/2018		
Checked by:	VM 02/13/2018		
Mfg. Review by:	DD 02/13/2018		
Approved by:	ML 02/14/2018		
Scale/Units			
Sheet 1 of 1			
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140-S-0.500
 DATE: 18/08/16

PO / BATCH NO.: P0040517/5102078

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 11.115 ft
 QUANTITY INSPECTED: 11.115 ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.500"
 THICKNESS RECEIVED: 0.500"
 SHEET SIZE ORDERED: 40" x 40"
 SHEET SIZE RECEIVED: 40" x 40"

DESCRIPTION	NCR (Check Y/N)		COMMENTS
	Y	N	
SURFACE DAMAGE	<input checked="" type="radio"/>	<input type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/>	<input type="radio"/>	
CORROSION	<input checked="" type="radio"/>	<input type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/>	<input type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/>	<input type="radio"/>	<i>ASTM A829</i>
CORRECT THICKNESS	<input checked="" type="radio"/>	<input type="radio"/>	
PHOTO REQUIRED	<input checked="" type="radio"/>	<input type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/>	<input type="radio"/>	<i>HT:297080</i>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/>	<input type="radio"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/>	<input type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/>	<input type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/>	<input type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>A1</u>	SIGNED OFF BY: _____
DATE: <u>18/08/16</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in